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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,255	09/22/2003	Masaharu Yokono	242294US2	9511

22850 7590 09/12/2006

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EXAMINER

BEATTY, ROBERT B

ART UNIT PAPER NUMBER

2852

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

<b>Application No.</b> 10/666,255	<b>Applicant(s)</b> YOKONO, MASAHARU	
<b>Examiner</b> Robert Beatty	<b>Art Unit</b> 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 22 May 2006 and 21 August 2006.
- 2a)  This action is FINAL.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-3,6-10 and 13-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-3,6-10 and 13-15 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3,6-10,13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ream '228 in view of Kato (JP# 11-24498) and Kowari (JP# 2001-318573).

Ream teach a color printing device comprising a plurality of print cartridges 42,43,44,45 comprising photosensitive drums, developing devices 32 and image exposure devices for forming latent images on the photosensitive drums so as to be developed with toner by the developing units. The developed color toner images are transferred to an intermediate transfer belt 20. The transfer belt comprises a home position mark 75 on the belt, drive and follower rollers 40,54,41 and transfer rollers 50-53 for transferring the developed color toner images onto the intermediate transfer belt. The intermediate transfer belt is removable as a unit from the printing device and has a memory storage unit 80 as an EEPROM located thereon. Upon detecting that the transfer belt unit is installed in the printing device the controller of the printer will be put into communication with the storage memory 80 (col.1, lines 44-46). The memory will have velocity profiles for velocity correction and

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belt tracking profiles that will correct for differences in the position and color registration of the transferred images (col.3, lines 58-59, col.5, lines 11-14). These profiles will be stored in the EEPROM at the time of manufacture. Specifically, Ream teach everything claimed except obtaining the belt velocity profiles by using a plurality of pre-formed marks on the transfer belt and transferring the stored data in the EEPROM to the memory of the image forming apparatus upon attachment of the transfer belt to the image forming apparatus.

Kato (JP) teach an image forming apparatus which forms color images by transferring them from a photosensitive drum to an intermediate transfer belt. A controller adjusts the speed of the image transfer belt 18 according to a sensed velocity profile. In Fig.2, there is one mark 18a, however in an alternative embodiment (see Fig.11) there are a plurality of marks 18a separated from each other in a direction of travel of the belt. These marks would constitute a "block" spaced from each other in a direction of travel of the belt and extending in a widthwise direction of the belt (perpendicular to the travel direction). In other words, there would be one mark per "block". As described in paragraphs 25-35, with regard to Fig.2, the velocity will be calculated (travel distance/ time traveled) for each rotation of the belt using one mark per rotation. However, as explained in paragraphs 42-43, it is not limited to this and one can find the velocities for each of the marks in Fig.11. Since a velocity "profile" is just the velocity vs time or distance,

Kato teach alternatively, finding the velocity profile by either using one reference mark or a plurality of reference marks.

Kowari (JP) teach an image forming apparatus 1 using a replaceable cartridges 2,3Y,3M,3C,3K,4. Each cartridge has a memory 5 for storing relevant data/parameters regarding the cartridge Upon, the attachment of the cartridge, the data in the memory will be automatically read out and stored in the memory 122 of the image forming apparatus.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ream's stored velocity profile to include one obtained by using a plurality of marks because more accurate instantaneous velocity detection (per block) can be obtained which would help with the maintaining of the transfer belt at a constant velocity. It further would have been obvious to one of ordinary skill in the art at the time the invention was made to read out and transfer data from the replaceable unit (such as Ream's replaceable transfer unit) upon installation because updating or servicing can be facilitated

2. Applicant's arguments filed 5/22/06 (entered 8/21/06) have been fully considered but they are not persuasive.

The applicant has amended the claims to include an alternative expression "or the correction data is inputted from an operation panel" which the examiner does not need to address with prior art since it is an alternative expression. The applicant has argued on page 10, lines 19-22 of the response, that there is not

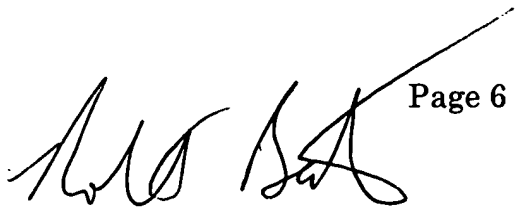
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motivation to combine Kato and Kowari and thus a prima facie case of obviousness has not been established. It is noted that the examiner is not merely combining Kato and Kowari but Ream in view of Kato and Kowari (specifically Ream in view of Kato and Ream in view of Kowari). It is believed that the examiner has provided reasons why one of ordinary skill in the art would be motivated to modify Ream with the teachings of Kato and why one of ordinary skill in the art would be motivated to modify Ream with the teachings of Kowari.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray, can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

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Robert Beatty  
Primary Examiner  
Art Unit 2852

September 4, 2006